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# Allowing Mining in Bristol Bay Puts Wildlife at Risk

By Meta L. Maxwell August 23, 2011

When flying low over southwest Alaska, it is easy to be dazzled by the seemingly endless vista of mountains, woods and tundra woven together by 40,000 square miles of wetlands, lagoons, ponds, lakes, streams and rivers that feed into Bristol Bay. This pristine wilderness supports the world's largest sockeye salmon runs—each June up to 48 million salmon are expected to glow lipstick red as they make their way toward spawning grounds upriver from the bay.

It also supports many Native Alaskans—primarily Yupik, but also Aleut, Dena'ina, Athabascan and Tlingit—who have called Bristol Bay their sacred home for thousands of years. The landscape is dotted by their peaceful villages, most of them accessible only by plane, boat or snowmobile. But Bristol Bay's apparent calm belies the area's geological volatility and recent dire threats posed by mining companies, which are planning to open vast copper-gold-molybdenum mines.

## Impending Unnatural Disasters

For thousands of years Bristol Bay—as well as the Native Alaskans and abundant wildlife living there—survived earthquakes, tsunamis, volcanic eruptions and harsh weather conditions. The Alaska Earthquake Information Center (AEIC) says, “Alaska has 400 to 500 earthquakes per week, many in the Bristol Bay region.” Two of the seven largest earthquakes of this past century have occurred in the Aleutian Islands, and although it is generally believed that great earthquakes are rare, AEIC reports that “on average, Alaska has a magnitude 7.0 or larger earthquake about every two

years.” The region is also part of the Ring of Fire, home to 124 volcanoes, of which only 25 are classified by AEIC as “inactive.”

Despite these natural threats, Native Alaskans have developed thriving hunting and tourism industries in recent years, including the largest fishing industry in the country—generating about \$445 million revenue annually—without disrupting Bristol Bay’s ecological balance. But in the past quarter century, mining in Bristol Bay has become a threat to this wilderness, and residents are engaged in a fight with the U.S. government, the state of Alaska and individuals seeking to profit from the area’s vast oil, gas and mineral deposits.

Threats to fisheries from oil and gas development include disruption from seismic testing, air pollution from ship traffic and the risk of oil spills. According to the Pew Environment Group, “The area’s harsh weather, rough seas, ice and strong currents would make cleanup and containment of an oil spill difficult, if not impossible.”

### **Getting the Mine Shaft**

In 1986, in defiance of raging opposition from local communities, the fishing industry and the state of Alaska, the federal government offered 5.6 million acres of the southern end of Bristol Bay for oil and gas leasing.

On March 24, 1989, after the Exxon Valdez supertanker ran aground and began leaking oil in Alaska’s beautiful and biologically rich Prince William Sound (which still has not recovered from the disaster), Congress spent more than \$100 million to buy back oil leases in the area. In 1998, President Bill Clinton withdrew Bristol Bay from leasing consideration until 2012, but in 2007 President George W. Bush reopened those 5.6 million acres to oil drilling. In March 2010, President Obama, at the urging of Native Alaskans and others, withdrew the area from consideration for oil and gas development until 2017, but while oil and gas development in Bristol Bay has been delayed, a potentially larger threat to the environment is posed by

companies racing to buy up mineral rights in the area, where thousands of years of volcanic eruptions have left vast mineral deposits.

Nearly 2 million acres of the Bristol Bay region are designated by the state of Alaska for mineral exploration and development. Mining companies are actively exploring the area for copper, gold, silver, molybdenum, rhenium, palladium and other minerals valued in global markets. Recognizing the destruction to the environment that would ensue from mining in the area, Native Alaskans, the fishing industry, and environmental groups began fighting mining plans early on. In 2008, they got a Clean Water Act before voters that would have banned the discharge of toxic materials and effectively shut down mining operations. But with the help of then-governor Sarah Palin and a \$12 million advertising campaign sponsored by the mining industry, the act was defeated. Ever since, mining companies have been hauling in equipment and increasing their exploration from the surface to deep underground. Hundreds of exploratory holes have been dug in anticipation of hard-rock mining of very low-grade deposits—ones that have less than one percent minerals.

The most imminent mining threat to Bristol Bay is posed by the Pebble Limited Partnership (PLP), which owns the Pebble Deposit mine and 186 square miles of associated land. That mine is sandwiched between two large national parks, Katmai and Lake Clark, and the headwaters of the Kvichak and Nushagak Rivers, that feed Bristol Bay and are key spawning grounds for millions of salmon. The proposed excavation of the Pebble Deposit could leave a massive scar in the earth, one that might never heal. Mark Reed, professor of geology at the University of Oregon, who reviewed the Pebble site plan says, “the map shows a pit of about 2 square miles area.... A rectangle surrounding the pit, dumps, tailings pond and mill encloses about 39 square miles, within which maybe 30 square miles at most consist of disturbed ground.... ” In an article in the December 2010 National Geographic John Shively, chief executive officer, PLP, said the mining site “would be less than half that” size.

According to Northern Dynasty Minerals, which is part of the PLP, “Current concepts for proposed infrastructure requirements include 86 miles of new road to connect to a port site on Cook Inlet, a parallel concentrate pipeline and transmission lines to carry power from a natural gas-fired generating plant on the Kenai Peninsula.” James Wyatt-Tilby, group head of media relations, Anglo American PLC, London, says, “The Pebble Partnership has spent over \$100 million on environmental and socioeconomic scientific baseline studies. This is a huge investment—because we

know we have to get this right. The engineering team working on the project design is world class. And in an unprecedented demonstration of transparency, Pebble has been releasing its Environmental Baseline Studies for independent scientific scrutiny through the Keystone Center's Independent Science Panels. Additionally it should be noted that once a preliminary development plan has been completed, the project will initiate permitting. This includes the National Environmental Policy Act process. The U.S. federal government will thoroughly scrutinize the development plan and the scientific information presented by PLP. The project will require an Environmental Impact Statement [EIS]. As part of the EIS process, the government will utilize an independent third party to craft the EIS."

When asked about the 22,000 earthquakes in Alaska each year—many in the Bristol Bay region, Wyatt-Tilby said, "Anglo American operates a number of copper mines in Chile. In February last year, Chile suffered the seventh biggest earthquake ever, at 8.8 on the Richter scale. There was widespread damage to infrastructure from this quake. Our tailings [mining residue] facilities were not damaged. Our mines suffered a temporary loss of power, and we were able to be up and running with minimal interruption. The point is that we know how to engineer tailings facilities in seismic zones so as to prevent their failure. The state of Alaska has a Dam Safety review and permitting process that must be concluded before construction of a tailings storage facility."

### **Warriors and Worriers**

For the first time Bristol Bay's Native Alaskan subsistence fishermen, commercial and sport fishing communities have banded together to stop the mining behemoths. Others have joined them in this fight, including the Natural Resources Defense Council, Trout Unlimited, Alaska Conservation Foundation, Nunamta Aulukestai ("Caretakers of the Land"), Bristol Bay Native Corporation, 200 area chefs and restaurant owners, and a group of over 50 jewelers, including Tiffany & Co. and Boucheron, a supplier of jewels to the British royal family. They are adamant that destruction of the pristine wilderness, animal and fish habitat, and Native Alaskan way of life in the region is wrong—especially when there are alternative sources for copper, gold and other minerals to be mined. On April 12, a press release from Trillium Asset Management Corporation and Calvert Investments reported that

nearly 30 investor organizations representing more than \$170 billion in assets, and holding more than 13 million shares of Anglo American plc, had urged the U.S. Environmental Protection Agency (EPA) to “initiate a review process under the Clean Water Act to evaluate the mine waste impacts.... ”

Bob Gillam, founder of Anchorage-based McKinley Capital Management, LLC, a company that manages assets for clients around the world, says he has spent tens of millions of his own assets (after-tax dollars) to help Native Alaskans keep mining interests out of Bristol Bay and to preserve the environment, while the multibillion-dollar foreign mining leviathans are writing off all their lobbying costs, including overpayments for local services and donations to community causes in order to buy support from locals.

The groups opposing the mine have many reasons for doing so. Trout Unlimited is a national organization that maintains a staff of lawyers, policy experts and scientists dedicated to conserving, protecting and restoring North America’s coldwater fisheries and their watershed. On their website they say, “According to preliminary designs filed with the state of Alaska, the mine could require the world’s largest earthen dam, some 4.3 miles long and 700 feet high, to contain billions of tons of mining waste. The risk of acid mine drainage, heavy metal leakage, toxic dust and huge water withdrawals are just some of the myriad threats that Pebble poses to Bristol Bay and its salmon spawning grounds.”

The Alaska Conservation Foundation website says, “If developed, [Pebble] will be the largest open-pit mine in North America!...[tailings would go into] man-made lakes, created by flooding 10 square miles of land behind earthen dams... Sulfur and other chemicals would be impounded in these lakes—located in an active earthquake zone. And to keep things running smoothly, 35 billion gallons of water would be drawn from local streams and rivers each year.”

Carol Ann Woody is a former federal fisheries and wildlife scientist with over 20 years of experience in Alaska. She is adjunct faculty at the University of Alaska Fairbanks and owns and operates Fisheries Research and Consulting, specializing in Bristol Bay research. For the past three years she has been conducting fish surveys in the waters near the Pebble Prospect. One of her greatest concerns is that the proposed mining area is “a very wet place with lots of groundwater everywhere that interconnects the watersheds.... It is very difficult to map where the water goes. Also, the soil is very conductive and water moves through it quickly.” The U.S. Army Corps of Engineers confirms this, saying, “Almost the entire Bristol Bay Borough is considered a ‘wetland’ based on the Corps of Engineers standards.”

Wyatt-Tilby counters that by pointing out that “vast areas of Alaska can be classified as wetlands, and as such have a long history of managing development near and on wetlands. We know that a myth has been peddled by opposition groups that if the mine is built, then the fishery will be destroyed. This is what lies behind concerns that the project is too risky. We do not share the view that if Pebble is built the fishery is at stake. True, there is no such thing as a no-risk project. But the modern mining industry—and Anglo American is one of the very best modern miners in the world, we believe the best—knows how to design projects to mitigate and massively reduce those risks.

“The Pebble motto is ‘Fish come first’—this is a core value, not a PR gimmick. Pebble is about co-existence, not trading off one natural resource for another. And experience in Alaska shows that mining and fish can coexist. Our opposition repeatedly claims that this is an impossibility, but the facts prove them wrong, as the Fraser River’s record salmon run of 34 million in 2010—the highest since 1913—despite some intensive industrial activity in the watershed, including large scale copper mining.”

Woody disputes Wyatt-Tilby’s claims. She says the Fraser River’s record sockeye run was an anomaly, and quotes Jeffrey Young, an aquatic scientist for British Columbia’s David Suzuki Foundation: “One good day for the stock market doesn’t

make the end of the recession.” Woody says, “Make no mistake, Fraser River sockeye salmon are ‘in a recession.’ Biological productivity of Fraser River sockeye is declining and is at an all-time low.”

She also disputes Wyatt-Tilby’s contention that good planning can alleviate concerns about the welfare of Bristol Bay’s fish, wildlife and Native Alaskans. She says Pebble is a copper-sulfide deposit from volcanoes that when crushed can generate acid and dissolve metals. (“Copper is even used to kill algae in beautiful aquatic ponds,” she says.) Salmon key on upwelling groundwater in rivers for spawning. Even minute amounts of copper in the water, she says would impair the salmon’s ability to navigate to their spawning grounds, impair their ability to recognize kin or pheromones, weaken their ability to identify prey and the streams they have adapted to, and make them more vulnerable to predators.

In 2010, nine federally recognized Native Alaskan groups petitioned the EPA, asking that it use its authority under the Clean Water Act to protect the region, and in 2011, the EPA announced it would conduct a scientific study of the Bristol Bay watershed. “The Bristol Bay watershed is essential to the health, environment and economy of Alaska,” EPA Regional Administrator Dennis McLerran said. “Gathering data and getting public input now, before development occurs, just makes sense.”

EPA public affairs specialist Hanady Aisha Kader says the EPA has also begun to consult with tribes of the Bristol Bay area. “The purpose of the team is to review EPA’s work, provide technical information that EPA may not have and offer advise on the direction of the assessment. We have also begun meeting with Native corporations which have expressed an interest.” The EPA’s scoping document for the Bristol Bay Watershed Assessment is available online [here](#).

### **What Price Pristine?**

If mining does come to Bristol Bay, no one knows how large the project will be, what

infrastructure will be strewn across the landscape to support it, what population growth and urban sprawl will result. What is known is that a significant portion of the environment will be destroyed, affecting the lifestyles of Native Alaskans, fish and other wildlife, and fishing, hunting and tourism industries. While the PLP says it will incorporate safeguards and restoration programs in their plans, no one can provide assurances that any mine design will prevent ecological disaster. Frances Beinecke, president, Natural Resources Defense Council, for which Robert F. Kennedy Jr. is the senior attorney, says they are, “pulling out all the stops to keep this mega-mine out of the Bristol Bay wilderness.” Gillam says he too is in the fight to the end—to preserve the land for the people who have lived there for thousands of years.

As John Brockman, publisher and editor of [Edge.org](http://Edge.org) said at an event entitled When We Cannot Predict, “The earthquake and tsunami that hit northern Japan is the latest tragic example of our inability to predict when it matters most.”

Beinecke says, “Some risks just aren’t worth taking, and the Pebble Mine is one of them.”

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